REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 25, 35, 38 and 39 have been canceled to render the respective objections and §112 rejections moot.

Claims 23-29, 31-39 and 45 were rejected under 35 U.S.C. §103(a) as allegedly obvious over McReynolds in view of Soane and optionally Dixon. Claim 30 was rejected as allegedly obvious over McReynolds, Soane, optionally Dixon and Parce. Applicants respectfully traverse.

Dixon is not applicable to the presently claimed microstructures. Rather, Dixon relates to a method for manufacturing thermally fused honeycomb structures. The polymeric components described therein do not contain hollow structures in the form of closed microchannels, as is disclosed in accordance the present invention. One skilled in the art would not, based on Dixon, realize that rapid cooling can be applied in the case of the polymeric components formed in the present invention.

Based on the teaching of Soane, a skilled artisan would consider rapid cooling to be disadvantageous. In column 3, lines 6 to 9, Soane discloses that in a final step of the bonding process, the temperature is slowly reduced in order to maintain a stress-free interface that provides a stable assembled microchannelled structure. The procedure described suggests that slow cooling is a necessary step for fabricating microchannel structures, in contrast to the presently claimed invention.

McReynolds does not describe any cooling step in his disclosed method of manufacturing microfluidic devices. None of the McReynolds' figures document contain a cooling device, and the polymeric substrates described therein seem to be very sensitive in terms of temperature and pressure. Thus, on skilled in the art, based on the teaching of McReynolds, would surmise that due to stresses caused by fast temperature degradation, the conditions of rapid cooling would yield low grade components.

In contrast to the teachings of the cited references, it has been surprisingly found, according to the present invention, that rapid cooling is desirable and it is possible to maintain the quality of the resultant polymeric components.

Parce does not overcome the deficiencies of the foregoing combination of references.

In view of the foregoing, allowance is respectfully requested.

Any fees due may be charged to deposit account no. 50-0624.

Respectfully submitted

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